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ABSTRACT

A study was conducted to determine the feasibility of an animal health (paravetical) competency development inservice program for vocational agriculture teachers in Pennsylvania. Objectives were to identify the paravetic (paraveterinary medical) competencies needed by vocational agriculture teachers to teach high school students and adults via laboratory demonstrations and State Office of Education projects, to identify appropriate methods for teaching paravetic competencies, and to develop an awareness of legalities pertaining to the performance of these competencies. A survey instrument based on Mc Clay's National Agriculture Occupations Competency Study was administered to Pennsylvania vocational agriculture teachers. Practicing veterinarians and extension agents also supplied input on competencies and legislation affecting their performance. After data analysis, lists of beef and dairy, horse, sheep, swine, and poultry paravetical competencies were derived. It was concluded that (1) there are 90 paravetinary medical competencies in animal sciences needed by high school and adult level vocational teachers, (2) proper education in animal anatomy, physiology, and asepsis in conducting paravetical procedures is necessary, and (3) The Veterinary Medicine Practices Act of 1974 regulates the practice of veterinary medicine in Pennsylvania. Recommendations include a statewide inservice program, summer workshops, and hiring a full-time resource person to assist inservice faculty. The survey instrument is appended. (MN)

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Final Report

"FEASIBILITY STUDY FOR PARAVETIC COMPETENCY DEVELOPMENT OF VOCATIONAL AGRICULTURE TEACHERS"

(CONTRACT NO.: 83-9815)

by

Donald E. Evans
Project Director

The Pennsylvania State University
College of Agriculture
Department of Agricultural Education

September 1980

Pennsylvania Department of Education
Bureau of Research and Evaluation
Research Coordinating Unit
for
Vocational Education

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This report is submitted as the final summation of the feasibility study for a paravetical competency development inservice for vocational agriculture teachers in Pennsylvania. The study was conducted by the Department of Agricultural Education in cooperation with the Department of Veterinary Science at The Pennsylvania State University.

The project director expresses his sincere appreciation to several individuals: Drs. C. S. Card, L. J. Hutchinson, and L. D. Schwartz, DVM, Department of Veterinary Science, for their total support and cooperation; Mr. Edward Martsolf, graduate assistant for his devoted interest and extensive work; Mrs. Peg Luckovich for her secretarial assistance; and Dr. Gene M. Love for his advice and counsel.

The success of the study is a result of the support of the following groups: the faculty of the Department of Agricultural Education, the vocational agriculture teachers of Pennsylvania, and the paravetical competency advisory committee.

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ABSTRACT

PA839815: Feasibility Study for Paravetic Competency Development of Vocational Agriculture Teachers

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The purpose of the project was to conduct a feasibility study of the vocational agriculture teachers' need for animal health (paravetical) competencies. The project was also designed to gather the data necessary to prepare for a paravetical competency development inservice program for teachers of agriculture in Pennsylvania if the need for such a program was established.

Objectives

1. To identify the paravetic competencies needed by vocational agriculture teachers to teach high school students and adults via laboratory demonstrations or S.O.E. projects.

2. To identify the appropriate methods for teaching the paravetic competencies.

3. To develop an awareness of the legalities that pertain to the performance of paravetic competencies and to develop a working knowledge of the legalities affecting the performance of these competencies.

Outcomes

The activities in the project were accomplished in meetings involving vocational agriculture teachers, county extension agents, practicing veterinarians, and local faculty. Several individual interviews were conducted to secure input to develop instruments for the study and to interpret the data. These activities provided infomration to support the following outcomes:

1. Identification of animal health (paravetical) competencies to be taught to vocational agriculture teachers and the need for a comprehensive statewide inservice.

2. Development of the objectives for the statewide inservice and the selection of the methods for instruction.

3. Developed an awareness of the legalities that pertain to the performance of such animal heatlh (paravetical) competencies.

Audience

The resulting reports and materials are useful to teacher educators and vocational teachers in agriculture education.

Publications and Available Materials

Final Report, "Feasibility Study for Paravetic Competency Development of Vocational Agriculture Teachers," September 1980.

Animal Health Handbook for Vocational Agriculture Teachers - Curriculum Resource Library, Department of Agricultural Education, The Pennsylvania State University

Articles in Magazines:

Evans, Donald E. and L. Dwight Schwartz. "Paravetics," Pennsylvania Agricultural Education, January, 1980, p. 1-3.

Evans, Donald E. and L. Dwight Schwartz. "Assuring Competency in Paravetic Procedures," VocEd Journal, Agriculture Insider, Journal of American Vocational Association; May, 1980; Vol. 55, No. 5; p. 30a - 31b.

Evans, Donald E. "Paravetic Competency Feasibility Study for Vocational Agriculture," Center Update, Professional Personnel Development Center for Vocational Teacher Education, The Pennsylvania State University; Vol. 1, No. 2, Spring, 1980.

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BACKGROUND

There are several paraveterinary medical (paravetic) competencies in the instructional areas of animal science that are presumed to be needed by vocational agriculture teachers. Vocational agriculture teachers are requested to perform these paravetic competencies many times as they teach high school students and adults. This need is extremely evident as vocational agriculture teachers educate students via supervised occupational experience (S.O.E.) projects. Adults need this educational experience, too, as they manage their full-time or part-time farming programs. The paravetical competencies are essential to the success of the vocational agriculture teacher's performance of the position responsibilities.

Likewise, there is concern by veterinarians about inadequately trained persons providing paravetic services. It is recognized, however, that most of these services can be performed adequately by persons other than veterinarians, especially if they are properly educated in each procedure to be performed or taught. Proper training includes some instruction in and knolwedge of animal anatomy, physiology, and asepsis in the conducting of these procedures. Such knowledge and awareness is essential in order to minimize the pain, suffering, and/or undesirable side effects resulting from the paravetical procedures performed.

H. B. 1276 enacted in 1974 is known as the "Veterinary Medicine Practice Act" (Pennsylvania Veterinary Practice Act) which regulates the practice of veterinary medicine in the Commonwealth of Pennsylvania and specifies the imposing penalties. The legislative intent and purpose of the Act declares that the practice of veterinary medicine is a privilege which is granted by legislative authority in the interest of the public health, safety, and welfare, as well as to protect the public from being mislead by incompetent, unscrupulous, and unauthorized persons and from unprofessional or illegal

practices by persons licensed to practice veterinary medicine. This act is enacted in the interest of society, health, safety, and welfare of Pennsylvanians. The act also defines what may be done by persons other than veterinarians and under what circumstances.

OBJECTIVES

1. To identify the paravetic competencies needed by vocational agriculture teachers to teach high school students and adults via laboratory demonstrations or S.O.E. projects.
2. To identify the appropriate methods for teaching the paravetic competencies.
3. To develop an awareness of the legalities that pertain to the performance of paravetic competencies and to develop a working knowledge of the legalities affecting the performance of these competencies.

PROCEDURES

To prepare for an all-encompassing paravetic competency development effort, a feasibility study was conducted. The study identified the appropriate paravetic competencies used in vocational agriculture and availability of resources necessary to provide the experiences to learn these competencies.

1. A one half-time graduate assistant was identified to assist with the development of the survey instrument. The survey instrument was used to identify the paravetic competencies needed by vocational agriculture teachers. During the winter and spring terms, the paravetic survey was administered to vocational agriculture teachers in Pennsylvania, and the data were summarized to identify the paravetic competencies needed.
2. During the winter term, faculty from the departments of Veterinary Science and Agricultural Education visited with practicing veterinarians to discuss paravetic skills. Also, a complete review of the legalities affecting the use of these competencies by vocational agriculture teachers
3. During the spring term, 21 visits by faculty from the departments of Veterinary Science and Agricultural Education were scheduled with vocational agriculture teachers to review the legalities and the identified paravetic competencies so that proper planning could be done to prepare for the paravetic inservice classes.

4. An advisory committee was formed to give direction to the study. They met as a group to review the competencies identified for the inservice. The graduate assistant met with several of the committee members individually to discuss project activities.

A jury of experts was selected to aid in the development of the survey instrument for the feasibility study. From the Pennsylvania State University, Dr. L. Dwight Schwartz made initial contributions from the veterinarians' viewpoint. Other staff members from the Department of Dairy and Animal Science who made contributions of the first draft of the survey instrument were: Dr. Lester Burdette and Mr. Herb Jordan.

Extensive input was provided by as many practicing veterinarians in the field as time would allow to be contacted. These veterinarians, whose names were provided by Dr. L. D. Schwartz, were contacted, as well as vocational agriculture teachers and extension agents.

Veterinarian members of the jury of experts included:

Dr. J. R. Raught
Dr. Burley Anderson
Dr. J. Ramsay
Dr. Barry England
Dr. Ronald Stuber
Dr. Jesse Stover
Dr. Dale Shilling
Dr. Sara Sellers
Dr. Richard Smith
Dr. Carl Troop
Dr. Walter Traumbauer

An additional group of individuals contacted for counsel in gathering information included the following county extension agents: Jay Irwin, Max Smith, Glenn Shirk, Nancy Kadwell, and Dave Rynd.

A final group of persons completed the jury of experts. Four vocational agriculture teachers from various parts of the state were interviewed. They are: Bill Laughner, western Pennsylvania; Bob Herr, southeastern Pennsylvania; Dave Seamans, central Pennsylvania; and Roger Michelone, eastern Pennsylvania.

Each member of the jury of experts responded to an interview questionnaire according to their respective profession.

Development of the Survey Instrument -- The development of the survey instrument began with a review of McClay's National Ag Occupations Competency Study. A list of the competencies listed for various occupations in the livestock industry was summarized according to species.

In consultation with Mr. James Diamond, who is presently conducting a somewhat similar survey, this initial list was refined by selecting only those competencies showing a weighted mean of 2.5 or more (4.0 = Essential; 3.0 = Important; 2.0 = Of Some Importance; 1.0 = Not Important; 0 = Does Not Apply).

This refined list was then altered one more time by excluding all competencies that were not directly related to animal health care. Competencies dealing with areas such as showing and fitting, construction of facilities, record keeping, pasture and feed management, and breed characteristics were excluded.

DATA ANALYSIS

The resulting list of competencies included 90 competencies in five species that made up the survey form. A format for the survey form was established to allow each participant to respond to three areas which were: (1) Need to know; (2) Present ability; (3) Where learned.

Over 80 percent of the vocational agriculture teachers in Pennsylvania responded to the survey that was sent out to gather information regarding each teacher.

The average mean of all 90 competencies considered exceeded the 2.50 average mean level, further verifying the findings of the McClay Study. Ratings for "Need" and "Ability to Perform" by livestock species are presented in Tables 1-5. The rank order of all competencies by need is presented in Table 6.

ANIMAL HEALTH (PARAVETICAL) COMPETENCIES STUDIED

Item No.	Species No.	BEEF AND DAIRY PARAVETICAL SKILLS
1	1.	Assist in delivery of calves
2	2.	Detect cattle with parasites or injury
3	3.	Spray, dip, and dust cattle for parasites
4	4.	Identify symptoms of disease in cattle
5	5.	Mark cattle using ear notches, ear tags, and tattoos
6	6.	Detect cattle in heat
7	7.	Dehorn cattle
8	8.	Detect signs of labor
9	9.	Implant cattle with growth stimulants
10	10.	Operate cattle restraining equipment
11	11.	Read and understand cattle medical terminology
12	12.	Determine treatment procedure for cattle parasites
13	13.	Amputate dew claws
14	14.	Dehorn calves
15	15.	Apply medication to injuries
16	16.	Give medications with syringe or hypodermic needle
17	17.	Give medication to cattle orally, using the proper equipment
18	18.	Castrate cattle
19	19.	Identify mastitis problems and treat mastitis cows
20	20.	Use California Mastitis Test (CMT) to identify mastitis problems
21	21.	Trim animals' feet when necessary
22	22.	Remove extra teats from heifers
23	23.	Estimate calf's weight accurately (or weigh animal)
24	24.	Inseminate cow if direct herd service is used
25	25.	Proper use of thermometer

Item No.	Species No.	HORSE PARAVETICAL SKILLS
26	1.	Recognize symptoms of common equine diseases
27	2.	Apply sanitation and health practices
28	3.	Apply parasite and disease control program
29	4.	Care for the horses' limbs and hooves
30	5.	Handle horses safely
31	6.	Care for horse after work
32	7.	Mark the horse for identification
33	8.	Shoe horses
34	9.	Castrate stallions
35	10.	Detect and treat injury to horses
36	11.	Float teeth
37	12.	Administer vaccines

Item No.	Species No.	SHEEP PARAVETICAL SKILLS
38	1.	Identify nutrient deficiencies in sheep
39	2.	Check ewes' milk supply
40	3.	Identify symptoms of common diseases
41	4.	Identify symptoms of common parasites
42	5.	Interpret labels on medicines, drugs, and pesticide labels
43	6.	Identify injuries on sheep
44	7.	Develop a vaccination program
45	8.	Determine amounts of medicines or materials needed for specific situations
46	9.	Drench sheep
47	10.	Spray/dip sheep
48	11.	Take temperature
49	12.	Identify defects in sheep
50	13.	Determine age
51	14.	Determine condition of teeth
52	15.	Dock lambs
53	16.	Castrate lambs
54	17.	Mark, notch, tag, or tattoo ears
55	18.	Trim feet
56	19.	Assist ewes at lambing
57	20.	Revive chilled lambs
58	21.	Identify signs of approaching birth
59	22.	Assist lambs in first nursing
60	23.	Paint newborn lamb's navel with iodine
61	24.	Shear wool with power drive clippers
62	25.	Bundle and tie fleece

Item No.	Species No.	SWINE PARAVETICAL SKILLS
63	1.	Care for baby pigs at birth
64	2.	Identify estrus
65	3.	Castrate pigs
66	4.	Clip needle teeth
67	5.	Administer iron shots
68	6.	Ear notch pigs
69	7.	Clip tails
70	8.	Identify sick animals
71	9.	Recognize symptoms of swine disease
72	10.	Identify animals with parasite problems
73	11.	Determine proper methods and treatment for parasites
74	12.	Disinfect pens and equipment
75	13.	Treat pigs for scours
76	14.	Vaccinate pigs
77	15.	Mix wormers into feed and feed safely
78	16.	Disinfect navels of pigs
79	17.	Handle sows with suckling pigs safely

Item No.	Species No.	POULTRY PARAVETICAL SKILLS
80	1.	Administer vaccines and other medications
81	2.	Control insect pests
82	3.	Recognize disease symptoms
83	4.	Debeaking chicks
84	5.	Vaccinate birds -- differentiate between specific methods of application
85	6.	Diagnose parasite problems
86	7.	Treat parasite problems -- lice, mites
87.	8.	Caponize cockerels
88	9.	Treat disease symptoms
89	10.	Desnooding turkeys
90	11.	Clip wings (turkeys) - wing notching

TABLE 1

BEEF/DAIRY PARAVETICAL COMPETENCIES

Item No.		Need	Need Average Mean	Ability to Perform Average
19	1.	Identify mastitis problems/ treatment	3.75	3.27
21	2.	Trim animals' feet when necessary	3.75	3.39
14	3.	Dehorn calves	3.75	3.71
06	4.	Detect cattle in heat	3.74	3.95
18	5.	Castrate	3.70	3.60
04	6.	Identify disease symptoms	3.69	3.08
15	7.	Apply medication to injuries	3.68	3.79
20	8.	Use CMT to identify mastitis	3.65	2.81
16	9.	Give medication with syringe or hypodermic	3.64	3.46
02	10.	Detect cattle with parasites or injury	3.62	3.44

Additional competencies based on need and ability

11. Determine treatment for cattle parasites
12. Remove extra teats from heifers

TABLE 2

HORSE PARAVETICAL COMPETENCIES

Item No.		Need	Need Average Mean	Ability to Perform Average
27	1.	Apply sanitation and health practices	3.54	2.92
28	2.	Apply parasite and disease control program	3.53	2.64
30	3.	Handle horses safely	3.43	2.79
26	4.	Recognize symptoms of common equine diseases	3.33	2.08
29	5.	Care for horses limbs/hooves	3.33	2.25
31	6.	Care for horse after work	3.30	2.67
35	7.	Detect and treat injury to horses	3.14	2.07
37	8.	Administer vaccines	3.05	2.00
32	9.	Mark horse for identification	2.99	1.90
36	10.	Float teeth	2.74	1.42

TABLE 3

SHEEP PARAVETICAL COMPETENCIES

Item No.		Need	Need Average Mean	Ability to perform Average
42	1.	Interpret labels on medicines, etc.	3.65	3.22
53	2.	Castrate lambs	3.55	3.02
52	3.	Dock lambs	3.51	3.04
54	4.	Mark, notch, tag, or tattoo ears	3.49	2.95
57	5.	Revive chilled lambs	3.48	2.38
58	6.	Identify signs of approaching birth	3.48	2.56
60	7.	Newborn lamb's navel/iodine	3.48	3.32
41	8.	Identify symptoms of common parasites	3.47	2.53
55	9.	Trim feet	3.47	2.76
59	10.	Assist lambs in first nursing	3.47	2.79

Additions from Need and Ability:

1. Develop a vaccination program
2. Assist ewes at lambing
3. Determine amounts of medicines needed for specific situations
4. Spray/dip sheep
5. Determine age

TABLE 4

SWINE PARAVETICAL COMPETENCIES

Item No.		Need	Need Average Mean	Ability to Perform Average
65	1.	Castrate pigs	3.83	3.65
71	2.	Recognize symptoms of disease	3.79	3.00
63	3.	Care for baby pigs at birth	3.79	3.64
70	4.	Identify sick animals	3.78	3.30
73	5.	Determine proper methods and treatment for parasites	3.76	
72	6.	Identify animals with parasite problems	3.76	3.15
79	7.	Handle sows with suckling pigs	3.76	3.44
64	8.	Identify estrus	3.75	3.30
67	9.	Administer iron shots	3.75	3.47
75	10.	Treat pigs for scours	3.74	3.16
66	11.	Clip needle teeth	3.74	3.38

Additions from Need and Ability:

1. Vaccinate pigs

TABLE 5

POULTRY PARAVETICAL COMPETENCIES

Item No.		Need	Need Average Mean	Ability to Perform Average
82	1.	Recognize disease symptoms	3.45	2.38
86	2.	Treat parasite problems (lice, mites)	3.44	2.52
85	3.	Diagnose parasite problems	3.43	2.22
88	4.	Treat disease symptoms	3.41	2.20
87	5.	Caponize cockerels	3.40	2.32
81	6.	Control insect pests	3.40	2.57
80	7.	Administer vaccines/other medications	3.53	2.35
84	8.	Vaccinate birds - differentiate between specific methods of application	3.31	2.11
83	9.	Debeaking chicks	3.23	2.56
90	10.	Clip wings (turkeys) - wing notching	3.04	1.68

TALBE 6

RANK ORDER OF ALL COMPETENCIES BASED ON NEED

Line No.	Item No.	Species	Need	Rank	Diff.	Rank	Total Points
1	65	4	3.83	1	18	72	73
2	71	4	3.79	2.5	79	40	42.5
3	63	4	3.79	2.5	15	76	78.5
4	70	4	3.78	4	48	57.5	59.5
5	73	4	3.76	6	68	45.5	51.5
6	72	4	3.76	6	61	51.5	57.5
7	79	4	3.76	6	32	67.5	73.5
8	19	1	3.75	10	48	57.5	67.5
9	64	4	3.75	10	45	60	70
10	21	1	3.75	10	36	65	75
11	67	4	3.75	10	28	69	79
12	14	1	3.75	10	04	79	89
13	75	4	3.74	14	58	53.5	67.5
14	66	4	3.74	14	36	65	79
15	06	1	3.74	14	-21	88	102
16	74	4	3.73	16	03	80	106
17	68	4	3.72	17	17	74	91
18	77	4	3.71	18	32	67.5	85.5
19	18	1	3.70	19	10	77	96
20	04	1	3.69	20.5	61	51.5	71.5
21	78	4	3.69	20.5	02	81.5	101.5
22	76	4	3.68	22.5	69	44	66.5
23	15	1	3.68	22.5	-11	86	108.5
24	20	1	3.65	24.5	84	36	60.5
25	42	3	3.65	24.5	43	62	86.5
26	16	1	3.64	26	18	72	98
27	02	1	3.62	27.5	18	72	99.5
28	17	1	3.62	27.5	08	78	105.5
29	23	1	3.61	29	-06	84	113
30	25	1	3.59	30.5	24	70	100.5
31	07	1	3.59	30.5	-03	83	113.5
32	12	1	3.57	32	41	63	95
33	53	3	3.55	33	53	56	89

TABLE 6 (continued)

Line No.	Item No.	Species	Need	Rank	Diff.	Rank	Total Points
34	27	2	3.54	34	62	50	84
35	28	2	3.53	35	89	33	68
36	52	3	3.51	36.5	47	59	95.5
37	11	1	3.51	36.5	36	65	101.5
38	54	3	3.49	38.5	54	55	93.5
39	08	1	3.49	38.5	-18	87	125.5
40	57	3	3.48	41	110	10	51
41	58	3	2.48	41	92	31.5	72.5
42	60	3	3.48	41	16	75	116
43	41	3	3.47	44.5	94	28.5	73
44	22	1	3.47	44.5	73	41.5	86
45	55	3	3.47	44.5	71	43	87.5
46	59	3	3.47	44.5	68	45.5	90
47	82	5	3.45	48	107	15	63
48	56	3	3.45	48	95	26.5	74.5
49	05	1	3.45	48	-25	89	137
50	86	5	3.44	50	92	31.5	81.5
51	85	5	3.43	51.5	121	5.5	56.5
52	30	2	3.43	51.5	64	38	99.5
53	10	1	3.42	53	02	81.5	134.5
54	88	5	3.41	54	121	5.5	59.5
55	87	5	3.40	56	108	12.5	68.5
56	45	3	3.40	56	95	26.5	82.5
57	81	5	3.40	56	83	37	93
58	47	3	3.39	59.5	96	25	84.5
59	46	3	3.39	59.5	94	28.5	88
60	49	3	3.39	59.5	87	34	93.5
61	43	3	3.39	59.5	82	38.5	98
62	69	4	3.38	62.5	58	53.5	116
63	03	1	3.38	62.5	-07	85	147.5
64	44	3	3.37	64.5	118	8	72.5
65	40	3	3.37	64.5	100	22.5	87
66	50	3	3.35	67	104	19	86
67	80	5	3.35	67	100	22.5	89.5
68	48	3	3.35	67	44	61	128

TABLE 6 (continued)

Line No.	Item No.	Species	Need	Rank	Diff.	Rank	Total Points
69	26	2	3.33	69.5	125	4	73.5
70	29	2	3.33	69.5	108	12.5	82
71	38	3	3.32	72	102	21	93
72	51	3	3.32	72	93	30	102
73	01	1	3.32	72	-31	90	162
74	84	5	3.31	74	120	7	81
75	31	2	3.30	75	63	49	124
76	61	3	3.27	76	104	19	95
77	39	3	3.25	77	73	41.5	118.5
78	83	5	3.23	78	67	47	125
79	09	1	3.22	79	82	38.5	117.5
80	62	3	3.19	80	98	24	104
81	35	2	3.14	81	107	15	96
82	24	1	3.08	82	114	9	91
83	37	2	3.05	83	105	17	100
84	90	5	3.04	84	136	2	86
85	89	5	3.02	85	160	1	86
86	82	2	29.9	86	109	11	97
87	36	2	2.74	87	132	3	90
88	13	1	2.68	88	86	35	123
89	33	2	2.57	89	107	15	104
90	34	2	2.54	90	104	19	109

CONCLUSIONS

1. Vocational agriculture teachers need inservice education to stay alert to new and improved skills and techniques, as well as to know the current or regional legalities and limitations of teachers regarding their performance and/or the teaching of paravetic services. There are ninety (90) paraveterinary medical (paravetical, competencies in the instructional areas of animal science needed by teachers of vocational agriculture at the high school and young adult instruction level.
2. Likewise, there is concern by veterinarians about inadequately educated persons providing paravetical services. It is recognized, however, that most of paravetical techniques can be performed adequately by persons other than veterinarians, especially if such persons are properly educated in each procedure to be performed or taught. Properly educated includes some instruction in and knowledge of animal anatomy, physiology, and asepsis in the conducting of paravetical procedures. Such knowledge and awareness is essential in order to minimize the pain, suffering, and/or undesirable side effects resulting to animals on which paravetical procedures are performed.
3. HB 1276, enacted in 1974, is known as the "Veterinary Medicine Practice Act" and regulates the practice of veterinary medicine in the Commonwealth of Pennsylvania and imposes penalties. The Legislative Intent and Purpose: "It is hereby declared that the practice of veterinary medicine is a privilege which is granted by legislative authority in the interest of the public health, safety, and welfare and to protect the public from being mislead

by incompetent, unscrupulous, and unauthorized persons from unprofessional or illegal practices by persons licensed to practice veterinary medicine. This act is enacted in the interest of society, health, safety, and welfare of Pennsylvanians."

RECOMMENDATIONS

1. A statewide inservice should be conducted to address the animal health (paravetical) competency needs of the teachers of agriculture based on the differences between personnel and needed competencies. The objectives of the paravetic comepetency development inservice should be as follows:
   a. To provide beginning and experienced teachers the opportunity to learn new and enhance present paravetic competencies that are needed to teach students via laboratory demonstrations or the S.O.E. method of instruction.
   b. To provide beginning and experienced teachers the opportunity to become competent in paravetic skills that are needed to teach animal sciences to adults.
   c. To provide beginning and experienced teachers an awareness of the legalities that pertain to the performance of such paravetic competencies.
   d. To develop an animal health (paravetical) competency handbook for teachers of vocational agriculture.
2. The staff from Veterinary Science and Agricultural Education should set up a summer workshop for cooperating vocational agriculture teachers based on the jury of experts and advisory committee recommendations. These individuals will then become key persons for each of the fifteen inservice centers throughout the state. They will assist with the location of the inservice sites, the identification of the practicing veterinarian resource persons, and the identification of appropriate software for instructional activities. The inservice classes should be held during the Fall, Winter, and Spring Terms of 1980 and 1981.

3. Due to the extensiveness of this statewide technical inservice program, a full-time resource person should be hired by the Department of Agricultural Education to assist the inservice faculty with the numerous activities necessary to teach this extremely complex course. This individual should have an agricultural education background with a rich experience in animal health (paravetical) competencies. The resource person will work closely with the faculty, vocational agriculture local coordinators, and the agricultural specialist(s) at Penn State.

Appendix A

Memorandum of Agreement

THE PENNSYLVANIA STATE UNIVERSITY

INTER-OFFICE CORRESPONDENCE

Date: January 11, 1980

From: Donald E. Evans

To: Dean Beattie
Dr. Card
Dr. Curtis
Dr. Flipse
Dr. King
Dr. Love
Dr. Schwartz
Dr. Swope

Re: Paravetics Project

Enclosed please find a copy for your files of the Memorandum of Agreement. This agreement will cover efforts between the two departments for the paravetics competency development project.

We now have approval for the mini-project to do a feasibility study with assurances of an expanded program.

If you have any questions, please contact either Don Evans or Dwight Schwartz.

DEE/phl

Enclosure

APPENDIX A

MEMORANDUM OF AGREEMENT

between
the Departments of Agricultural Education
and Veterinary Science

Statement of the Problem

There are several paraveterinary medical (Paravetic) competencies in the instructional areas of animal science that are needed by teachers of vocational agriculture at the high school and young adult instruction level. Also, the vocational agriculture teachers need inservice training to stay alert to new and improved skills and techniques, as well as the current or regional legalities and limitations for them to perform or teach these paravetic services.

The magnitude of the concern by the vocational agriculture teachers themselves was reflected in a questionnaire survey on inservice training needs for fiscal year 1980 and 1981. In that survey 12 of the 15 (80%) Pennsylvania Vo Ag in-service training centers listed paravetic instruction as the primary inservice training needed.

Likewise there is concern by veterinarians about inadequately trained persons providing these paravetic services. It is recognized, however, that most of these techniques can be performed adequately by persons other than veterinarians, especially if they are properly trained in each procedure to be performed or taught. Properly trained includes some instruction in and knowledge of animal anatomy, physiology, and asepsis in the conducting of these procedures. Such knowledge and awareness is essential in order to minimize the pain, suffering and/or undesirable side effects resulting from paravetic procedures performed.

Pennsylvania Veterinary Practice Act

HB 1276 enacted in 1974 is known as the "Veterinary Medicine Practice Act" which regulates the practice of veterinary medicine in the Commonwealth of

Pennsylvania and imposing penalties. The Legislative Intent and Purpose: "It is hereby declared that the practice of veterinary medicine is a privilege which is granted by legislative authority in the interest of the public health, safety and welfare and to protect the public from being mislead by incompetent unscrupulous and unauthorized persons from unprofessional or illegal practices by persons licensed to practice veterinary medicine. This act is enacted in the interest of society, health, safety and welfare of Pennsylvanians."

In view of the need for refresher and inservice type training by teachers of vocational agriculture in paravetic procedures, the Department of Veterinary Science at Penn State University agrees to work with the Department of Agricultural Education in providing this training. It must be recognized, however, that only those paravetic procedures which are not in violation of the Pennsylvania Veterinary Practice Act can be addressed. Even many of the routine paravetic procedures such as castration, dehorning and vaccination are a violation when done on a fee basis by an unlicensed person whether or not they are a veterinarian.

Members of the Veterinary Science Department will be restricted to the instruction of Vo Ag teachers primarily at inservice training classes. They will not be available as speakers or instructors at Vocational Ag classes or meetings open only to members of Young Farmer classes. Meetings of this type are usually scheduled by the State-Federal Cooperative Extension Service and as such are open to the public. The scheduling of a veterinarian at non-extension meetings should be done by the respective instructor and not be a part of this agreement.

Members of each department of this agreement shall plan together those paravetic procedures to be taught. Only the procedures that are considered routine to livestock production will be included. Procedure requiring the use of surgical anesthesis such as ovariohysterectomy (spay), reduction of fracture and cesarean section, will not be included even though they are commonly done by licensed practicing veterinarians.

Travel costs and expenses for the development of teaching materials will be paid by the Department of Agricultural Education as part of the proposed project. The general agreement is for no honorariums to Veterinary Extension specialists. Honorariums for other Veterinary Science faculty should be negotiated on an individual basis.

Signature _____ 1/10/80
Head, Department of Agricultural Education

Signature C S Cook 1/10/80
Head, Department of Veterinary Science

Appendix B

"SURVEY INSTRUMENT"

BIOGRAPHICAL DATA

Name _____

School _____

County _____

No. of years' experience
teaching vocational agriculture _____

Indicate the inservice center you attend most frequently:

_____Clearfield
_____Cumberland Valley
_____Ephrata
_____Grove City
_____Indiana
_____Mansfield
_____Martinsburg
_____Mifflinburg
_____New Stanton
_____Philadelphia
_____Scranton
_____Upper Bucks
_____Wattsburg

Which of the 7 instructional areas of vocational agriculture would you classify as your own special interest?

_____Ag Production
_____Ag Resources
_____Ag Products
_____Forestry
_____Ag Mechanics
_____Ornamental Horticulture
_____Professional

In your present position, which of the 7 instructional areas of vocational agriculture is primarily your responsibility to teach?

_____Ag Production
_____Ag Resources
_____Ag Products
_____Forestry
_____Ag Mechanics
_____Ornamental Horticulture
_____Professional

INSTRUCTIONS

Rate yourself on each of the paravetical competencies on the following pages. Each competency requires only three responses. Please respond to each competency.

COLUMN I -- Do you need to know how to perform this competency? Circle the number that most closely identifies your particular need.

5 - great need
4 - considerable need
3 - moderate need
2 - desirable but not necessary
1 - no need

COLUMN II -- How well can you presently perform this skill? Circle the number that most closely indicates your present ability.

5 - can do well -- considerable experience
4 - can do well -- limited experience
3 - need more practice
2 - have seen demonstrated -- cannot perform
1 - cannot perform -- no opportunity to learn

COLUMN III -- If you can perform any of these paravetical skills, where did you learn the skills?

V - vocational agriculture course in high school
4-H - 4-H Club activities
C - College course (preservice and/or inservice)
F - living or working on a farm
O - other

SAMPLE:

Sheep Science Skills	I Need to Know (Circle One)	II Present Ability (Circle One)	III Where Learned (Circle One)
Drench Sheep	5 4 3 (2) 1	5 4 (3) 2 1	(V) 4-H C F O
Castrate Lambs	(5) 4 3 2 1	5 4 3 2 (1)	V 4-H (C) F O

BEEF AND DAIRY PARAVETICAL SKILLS	I Need to Know (Circle One)	II Present Ability (Circle One)	III Where Learned (Circle One)
	Need To ... Don't Need	Can Do ... Can't	
1. Assist in delivery of calves	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
2. Detect cattle with parasites or injury	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
3. Spray, dip, and dust cattle for parasites	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
4. Identify symptoms of disease in cattle	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
5. Mark cattle using ear notches, ear tags, and tatoos	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
6. Detect cattle in heat	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
7. Dehorn cattle	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
8. Detect signs of labor	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
9. Implant cattle with growth stimulants	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
10. Operate cattle restraining equipment	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
11. Read and understand cattle medical terminology	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
12. Determine treatment procedure for cattle parasites	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
13. Amputate dew claws	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
14. Pregnancy check	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
15. Dehorn calves	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
16. Apply medication to injuries	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
17. Give medications with syringe or hypodermic needle	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
18. Give medication to cattle orally, using the proper equipment	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
19. Castrate cattle	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
20. Identify mastitis problems and treat mastitis cows	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
21. Use California Mastitis Test (CMT) to identify mastitis problems	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
22. Trim animals' feet when necessary	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
23. Remove extra teats from heifers	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
24. Estimate calf's weight accurately (or weigh animal)	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
25. Inseminate cow if direct herd service is used	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
26. Proper use of thermometer	5 4 3 2 1	5 4 3 2 1	V 4-H C F O

HORSE PARAVETICAL SKILLS	I Need to Know (Circle One)	II Present Ability (Circle One)	III Where Learned (Circle One)
	Need To ... Don't Need	Can Do ... Can't	
1. Recognize symptoms of common equine diseases.	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
2. Apply sanitation and health practices	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
3. Apply parasite and disease control program	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
4. Care for the horses' limbs and hooves	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
5. Handle horses safely	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
6. Care for horse after work	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
7. Mark the horse for identification	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
8. Shoe horses	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
9. Castrate stallions	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
10. Detect and treat injury to horses	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
11. Float teeth	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
12. Administer vaccines	5 4 3 2 1	5 4 3 2 1	V 4-H C F O

SHEEP PARAVETICAL SKILLS	I Need to Know (Circle One)	II Present Ability (Circle One)	III Where Learned (Circle One)
	Need To — Don't Need	Can Do — Can't	
1. Identify nutrient deficiencies in sheep	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
2. Check ewes' milk supply	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
3. Identify symptoms of common diseases	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
4. Identify symptoms of common parasites	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
5. Interpret labels on medicines, drugs and pesticide labels	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
6. Identify injuries on sheep	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
7. Develop a vaccination program	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
8. Determine amounts of medicines or materials needed for specific situations	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
9. Drench sheep	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
10. Spray/dip sheep	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
11. Take temperature	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
12. Identify defects in sheep	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
13. Determine age	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
14. Determine condition of teeth	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
15. Dock lambs	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
16. Castrate lambs	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
17. Mark, notch, tag, or tatoo ears	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
18. Trim feet	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
19. Assist ewes at lambing	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
20. Revive chilled lambs	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
21. Identify signs of approaching birth	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
22. Assist lambs in first nursing	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
23. Paint newborn lamb's navel with iodine	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
24. Shear wool with power drive clippers	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
25. Bundle and tie fleece	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
26. Pregnancy check	5 4 3 2 1	5 4 3 2 1	V 4-H C F O

SWINE PARAVETICAL SKILLS	I Need to Know (Circle One)	II Present Ability (Circle One)	III Where Learned (Circle One)
	Need To — Don't Need	Can Do — Can't	
1. Care for baby pigs at birth	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
2. Identify estrus	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
3. Castrate pigs	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
4. Clip needle teeth	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
5. Administer iron shots	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
6. Ear notch pigs	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
7. Clip tails	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
8. Identify sick animals	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
9. Recognize symptoms of swine diseases	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
10. Identify animals with parasite problems	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
11. Determine proper methods and treatment for parasites	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
12. Disinfect pens and equipment	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
13. Treat pigs for scours	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
14. Vaccinate pigs	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
15. Mix wormers into feed and feed safely	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
16. Disinfect navels of pigs	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
17. Handle sows with suckling pigs safely	5 4 3 2 1	5 4 3 2 1	V 4-H C F O

POULTRY PARAVETICAL SKILLS	I Need to Know (Circle One)	II Present Ability (Circle One)	III Where Learned (Circle One)
	Need To ... Don't Need	Can Do ... Can't	
1. Administer vaccines and other medications	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
2. Control insect pests	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
3. Recognize disease symptoms	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
4. Debeaking chicks	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
5. Vaccinate birds -- differentiate between specific methods of application	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
6. Diagnose parasite problems	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
7. Treat parasite problems -- lice, mites	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
8. Caponize cockerels	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
9. Treat disease symptoms	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
10. Desnooding turkeys	5 4 3 2 1	5 4 3 2 1	V 4-H C F O
11. Clip wings (turkeys), also wing notching	5 4 3 2 1	5 4 3 2 1	V 4-H C F O

THE PENNSYLVANIA STATE UNIVERSITY
102 ARMSBY BUILDING
UNIVERSITY PARK, PENNSYLVANIA 16802

College of Agriculture
Department of Agricultural Education

Area Code 814
863-0443

March 11, 1980

TO: VO-AG TEACHER

Dear Educator:

WE NEED YOUR HELP!

In checking over our returns from the survey concerning the development of an inservice "paravetic" skills course, we found no reply from you.

As you know, it is important that we hear from all vo-ag teachers to establish the need for this course. For this reason, we have enclosed another copy of the survey for your convenience. Please respond at your earliest convenience.

If you have already sent your survey, please disregard this one.

Thank you for your cooperation.

Sincerely,

Edward L. Martsolf

Edward L. Martsolf

AN EQUAL OPPORTUNITY UNIVERSITY

Appendix C

"ADVISORY COMMITTEE"

THE PENNSYLVANIA STATE UNIVERSITY
102 ARMSBY BUILDING
UNIVERSITY PARK, PENNSYLVANIA 16802

College of Agriculture
Department of Agricultural Education

Area Code 814
863-0443

January 30, 1980

As you know, there are several paraveterinary medical (Paravetic) competencies in the instructional areas of animal science that are needed by vocational agriculture teachers and county extension agents. These competencies are demonstrated many times during classroom, laboratory, or project activities. The Department of Agricultural Education has contracted with the Bureau of Vocational Education, Pennsylvania Department of Education to conduct a feasibility study for paravetic competency development. The Department of Veterinary Science has agreed to cooperate on this project.

The long-range objectives of the study are to provide beginning and experienced instructors the following opportunities:

1. To learn new and enhance present paravetic competencies.
2. To become competent in paravetic skills that are needed to teach youth and adults.
3. To become aware of the legalities that pertain to the performance of such paravetic competencies.
4. To develop paravetic task sheets for instructional units.

The duration of the feasibility study will be January 1, 1980, to June 30, 1980. In addition, a paravetic competency development project is being planned for July 1, 1980 - June 30, 1981. Members of the advisory group include:

Lew Ayers, Ephrata Area High School
Bob Herr, Eastern Lancaster
Bill Laughner, Mohawk
Roger Michelone, Western Montgomery
Paul Ruth, Central High School
Ron Sollenberger, Gettysburg High School

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Byron Ginther, Huntingdon
Robert Hetrick, Blair
Jay Irwin, Lancaster
Nancy Kadwell, Montgomery
Dave Rynd, Lawrence
John Schwartz, Adams
Jared Tyson, Adams

We appreciate your willingness to cooperate on the project and look forward to meeting with you soon.

Sincerely,

Edward L. Martsolf

ELM/phl

THE PENNSYLVANIA STATE UNIVERSITY
102 ARMSBY BUILDING
UNIVERSITY PARK, PENNSYLVANIA 16802

College of Agriculture
Department of Agricultural Education

Area Code 814
863-0443

April 23, 1980

TO: PARAVETICS ADVISORY COMMITTEE

Thank you for agreeing to assist with the planning of the "Paravetic" inservice course. During the past several weeks, we have been contacting several ag teachers, county agents, and veterinarians for their input, too.

A survey of agriculture teachers across the state has also been conducted to determine which paravetical skills they can now perform, as well as which skills they consider they need to know to conduct their present vocational agriculture programs. Approximately 75% of the teachers responded to that survey and some interesting results are now coming back from the computer. At this point, there is a need to bring together the Advisory Committee, ag teachers - county agents - veterinarians, to discuss some of these findings and to help determine the future direction of our new inservice course.

Would it be possible for you to attend this meeting that is scheduled for May 12 from 10:00 AM to 3:00 PM in Room 305, J. O. Keller Building? Your meal will be provided and your travel expenses will be reimbursed.

Please return the enclosed information form so that we can proceed with planning details.

Thanks for your cooperation in this matter.

Sincerely,

L. Dwight Schwartz
L. Dwight Schwartz
Professor
Veterinary Science
Extension

Don
Donald E. Evans
Assistant Director
Vocational Teacher
Education

DEE/phl
Enclosure

AN EQUAL OPPORTUNITY UNIVERSITY

THE PENNSYLVANIA STATE UNIVERSITY
102 ARMSBY BUILDING
UNIVERSITY PARK, PENNSYLVANIA 16802

College of Agriculture
Department of Agricultural Education

Area Code 814
863-0443

May 5, 1980

TO: Paravetic Advisory Committee

Dear Committee Members:

Find enclosed additional materials for the Paravetic Advisory Committee Meeting scheduled for May 12 from 10 AM - 3 PM in Room 305 J. O. Keller. Additional information will be given to you at the meeting for discussion and review.

Please plan to park in the Conference parking lot which is adjacent to the Keller Center. As you arrive on campus, please stop at one of the University information booths to get directions. Other travel and subsistence expenses will be processed at the meeting. If you have any questions, please don't hesitate to contact us.

Sincerely,

Donald E. Evans
Assistant Director
Vocational Teacher Education

L. Dwight Schwartz
Professor
Veterinary Science Extension

AN EQUAL OPPORTUNITY UNIVERSITY

THE PENNSYLVANIA STATE UNIVERSITY
DEPARTMENTS OF AGRICULTURAL EDUCATION AND VETERINARY SCIENCE

PARAVETICS ADVISORY COMMITTEE

May 12, 1980
Tentative Agenda

9:30 AM	Coffee and Donuts	
10:00 AM	Introductions Committee Members Paravetics' Competency Development Projects	*Dr. Don Evans*
11:00 AM	Feasibility Study	*Mr. Ed Martsolf* *Dr. Burley Anderson*
11:45 AM	LUNCH	
1:00 PM	Committee Discussions and Input	*Dr. Don Evans* *Dr. Dwight Schwartz*
2:30 PM	Paravetic Workshop/Seminar	*Ms. Terry Coon*
3:00 PM	Adjourn	

PARAVETIC ADVISORY COMMITTEE

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RD #2, Box 30
Loysville, PA 17047

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CE - Cooperative Extension Service
PSU - Penn State University
V - Veterinarians
VA - Vocational Agriculture

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THE PENNSYLVANIA STATE UNIVERSITY
INTER-OFFICE CORRESPONDENCE

Date: May 21, 1980

From: Lawrence J. Hutchinson

To: Don Evans, L. Dwight Schwartz

Subj: Paravetic Advisory Committee Meeting, May 12.

I want to express my appreciation for the fine job you two did in putting together and chairing the advisory committee meeting on May 12. The discussion did a lot to clear up misconceptions and helped clarify the future direction of this project.

Following that meeting, I've given further thought to the project and will offer some suggestions:

-I expressed an objection to the term "paravetic." Although intended as an adjective, I think it will be misused. It is a catchy name. How about using "Animal Health Skills," "Animal Health Competency," "Animal Care Skills," or "Animal Care Competency" to identify the program?

-Selection of the specific skills to teach is an important task. The skills selected should be ones widely utilized by animal owners and appropriate to a fairly wide range of expected competencies (e.g.: skills that both a full-time herdsman or a part-time farmer could learn to do with a reasonable degree of proficiency.

-Communication with veterinary practitioners in Penna. will be important if they are to be supportive rather than antagonistic toward the program. I'd suggest an article written by both of you for mailing with our veterinary newsletter.

-Local veterinarians can be helpful in the training process at the regional centers. They need to understand and support the aims of the project.

cc: C.S. Card